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THE RATE AND POSITION OF *UH(M)* IN INTERPRETING AS DETERMINED BY COGNITIVE LOAD

Overview

Intro: Cognitive load in interpreting

Research questions

Data

Method

Results

Conclusion

Cognitive load in interpreting

Gile's (1997) Effort Model: I = L + P + M + C

Seeber's (2011) Cognitive Load Model

Gerver (1976)

Moser (1978)

Setton (1999)

…

Cognitive load in interpreting

Disfluencies (e.g. *uh(m)*,…) are indications of processing difficulties

Goldman-Eisler (1967); Mead (2000); Tissi (2000); Cecot (2001);…

Levelt (1983); Bortfeld et al. (2001); Clark & Fox Tree (2002);…

Cognitive load in interpreting

Setton (1999: 247)

	Attention to input	**Attention to formulation**
Long silent pause	High	-
Short pausing	Normal listening	Routine planning
Filled pause	Normal listening	Routine planning
Mixed: Short & filled pauses & voice effects	Normal listening	Routine planning
Long filled pause	Relaxed or off	Planning/Searching
Fluent unmodulated string	Relaxed or off	Off

Research questions

1. Does cognitive load have the same effect in interpreting as in non-interpreting?
2. Does the input load differ from the output load in interpreting?
3. Is the cognitive load in interpreting higher at the onset or later?

Data

Corpora

- Naturalistic data (Gile 1998)
- Additional comparison of interpreting with non-interpreting (Baker 1993)

Data

Corpora

- European Parliament Interpreting Corpus – Ghent
- Spoken Dutch Corpus – component g

Data

European Parliament Interpreting Corpus – Ghent

Plenary sessions of the European Parliament

2006-2008

French, Spanish, Dutch, and English

220 000 tokens… and rising

Data

European Parliament Interpreting Corpus – Ghent

Transcribed according to VALIBEL-corpus (Bachy et al. 2007)

POS-tagged and chunked by means of LeTs (Van de Kauter et al. 2013)

Sentence-aligned with WinAlign

Data

Spoken Dutch Corpus – component g
(Oostdijk 2000)

Parliamentary debates

360 000 tokens

- Flanders: 140 000
- The Netherlands: 220 000

1998-2003

Data

		Nr. of files	Nr. of sentences
EPICg	FRA (source)	108	1458
	DUT (target)	108	1437
SPCg		240	19046
	(Fl	155	8293)
	(Nl	85	10753)

Method

Generalized Additive Mixed Model

Response: Rate or position of *uh(m)* per sentence (with total no. words as 'offset')

Predictors:

- Lexical density
- Proportion of numbers
- Delivery rate

Random factor: Files (108+240)

Method

Lexical density: Nr. of content words / (nr. of content words + nr. of function words)

Proportion of numbers: Nr. of numerals / total nr. of words

Delivery rate: Total nr. of words / total nr. of minutes

Results

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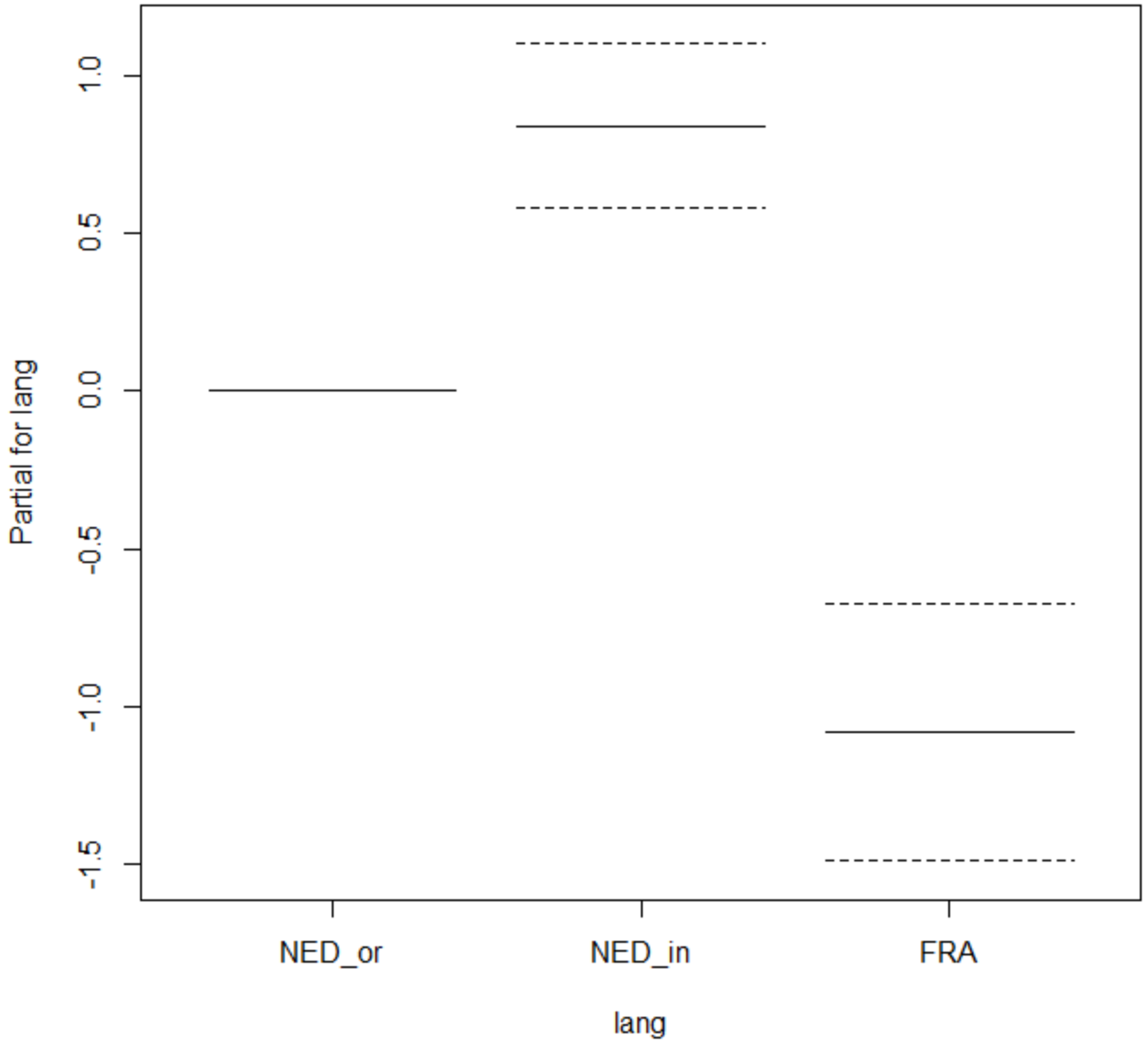
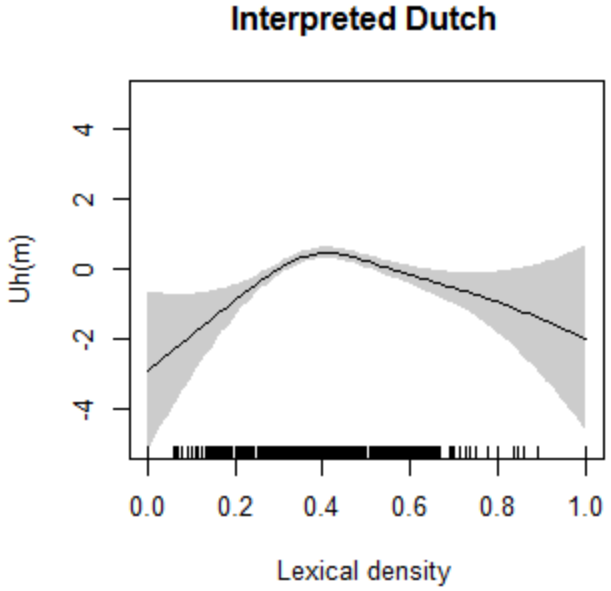
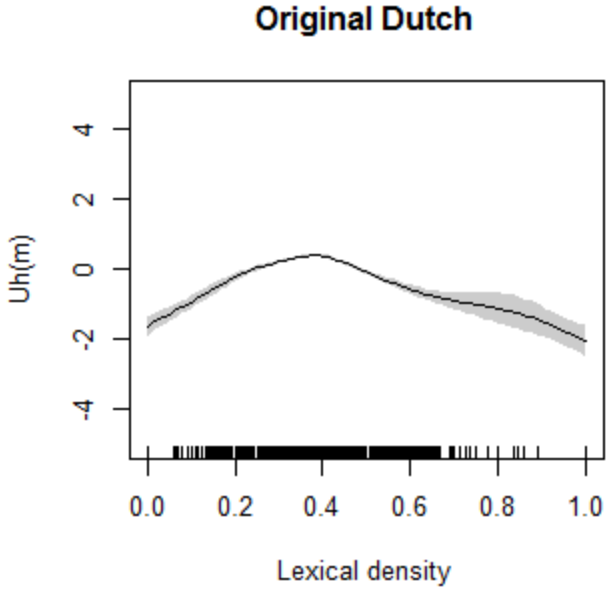
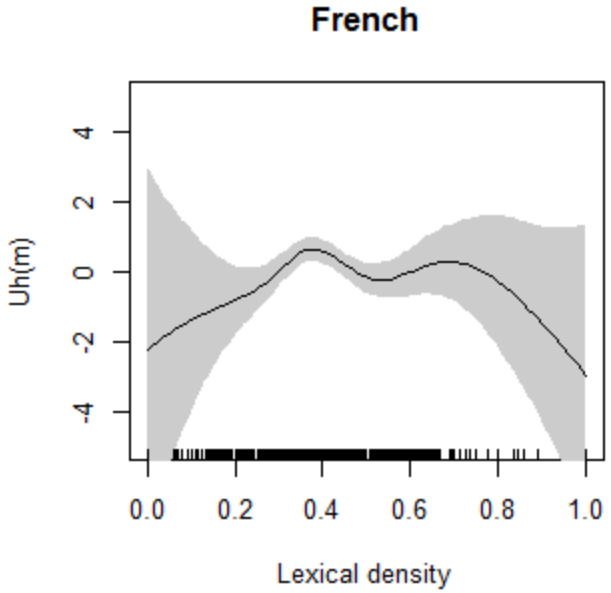
'Language'



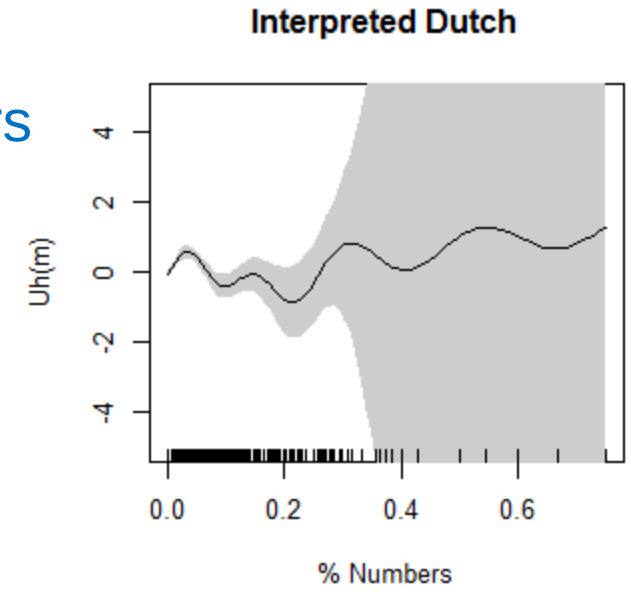
Lexical density

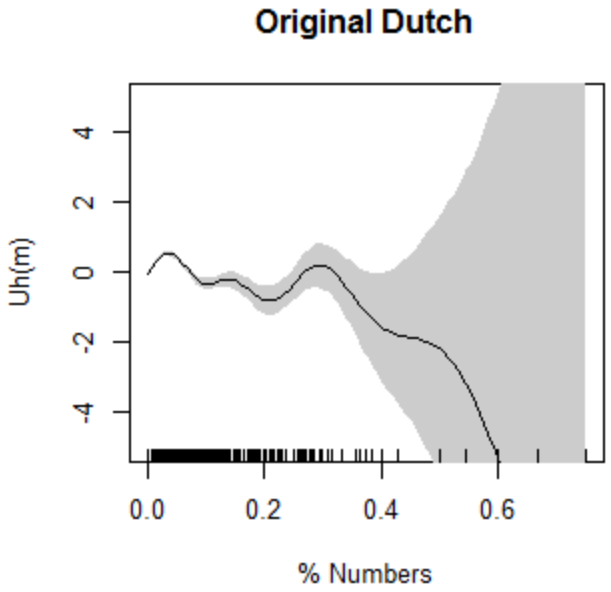


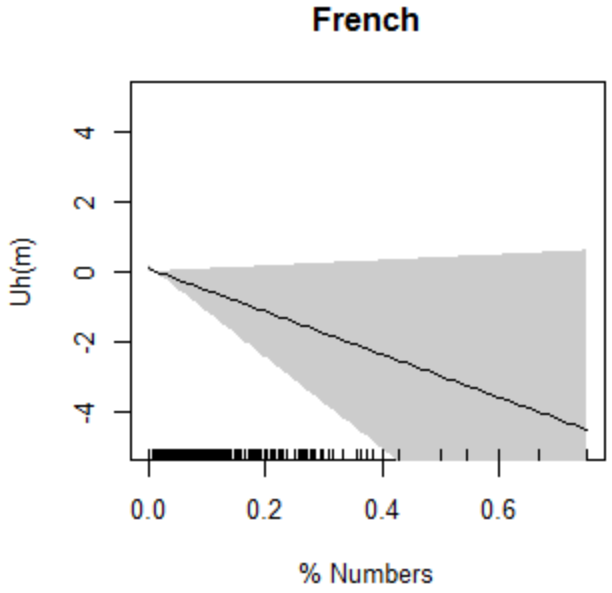




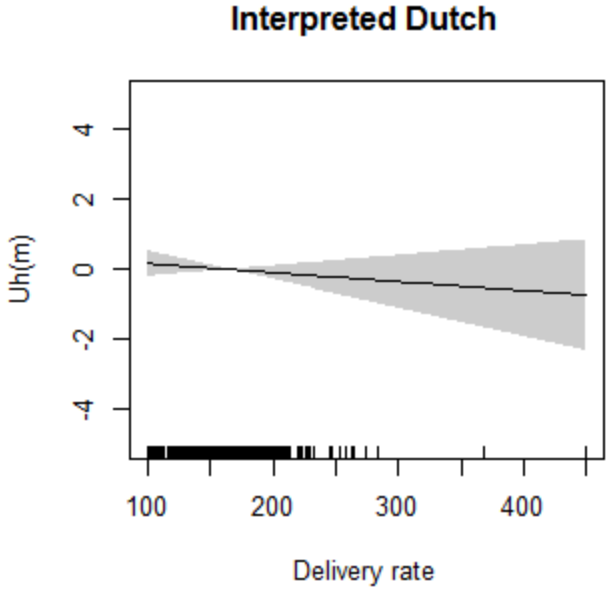
% of numbers

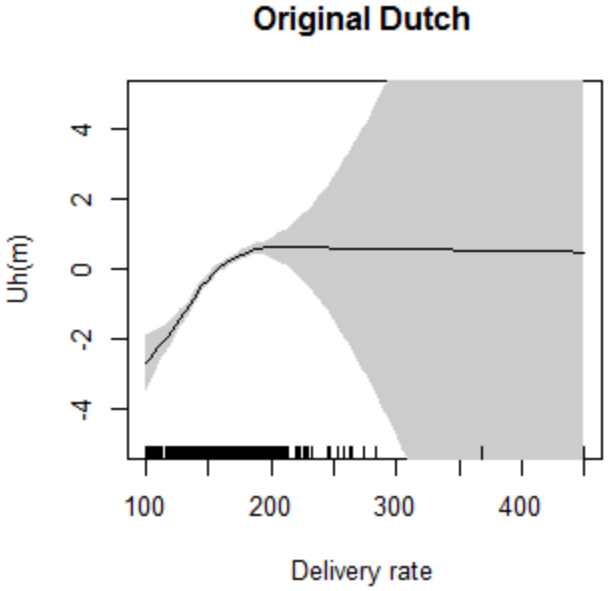

Interpreted Dutch
Uh(m)
4
2
0
-2
-4
0.0
0.2
0.4
0.6
% Numbers

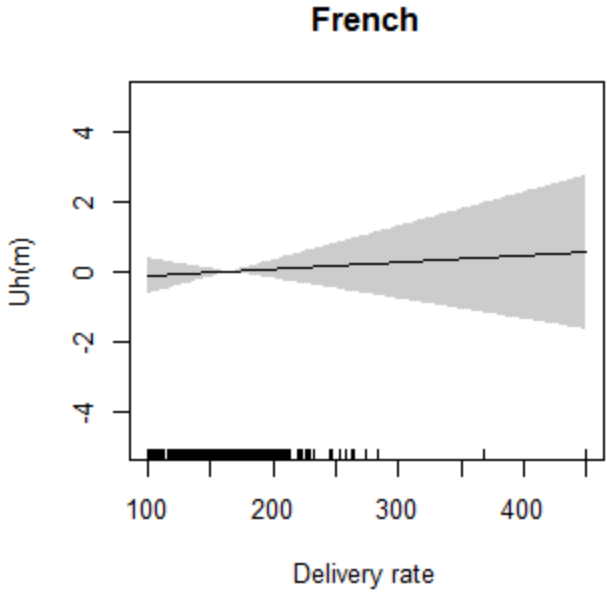

Original Dutch
Uh(m)
4
2
0
-2
-4
0.0
0.2
0.4
0.6
% Numbers


French
Uh(m)
4
2
0
-2
-4
0.0
0.2
0.4
0.6
% Numbers

Delivery rate







Results

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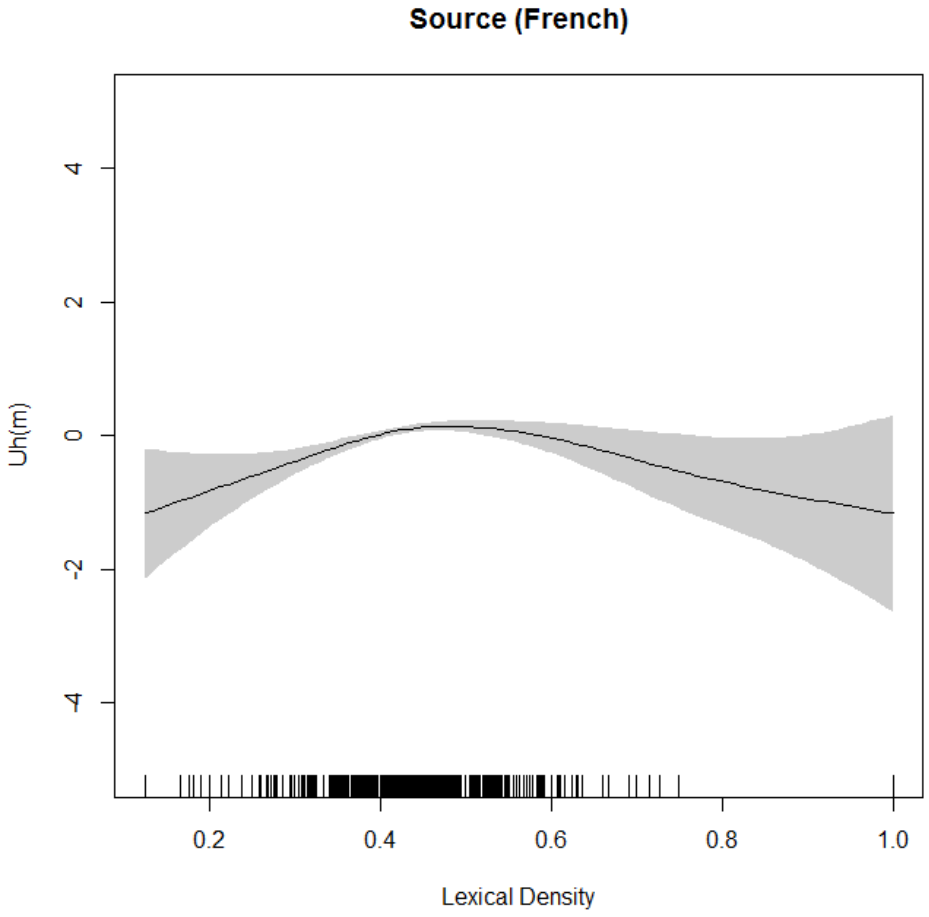
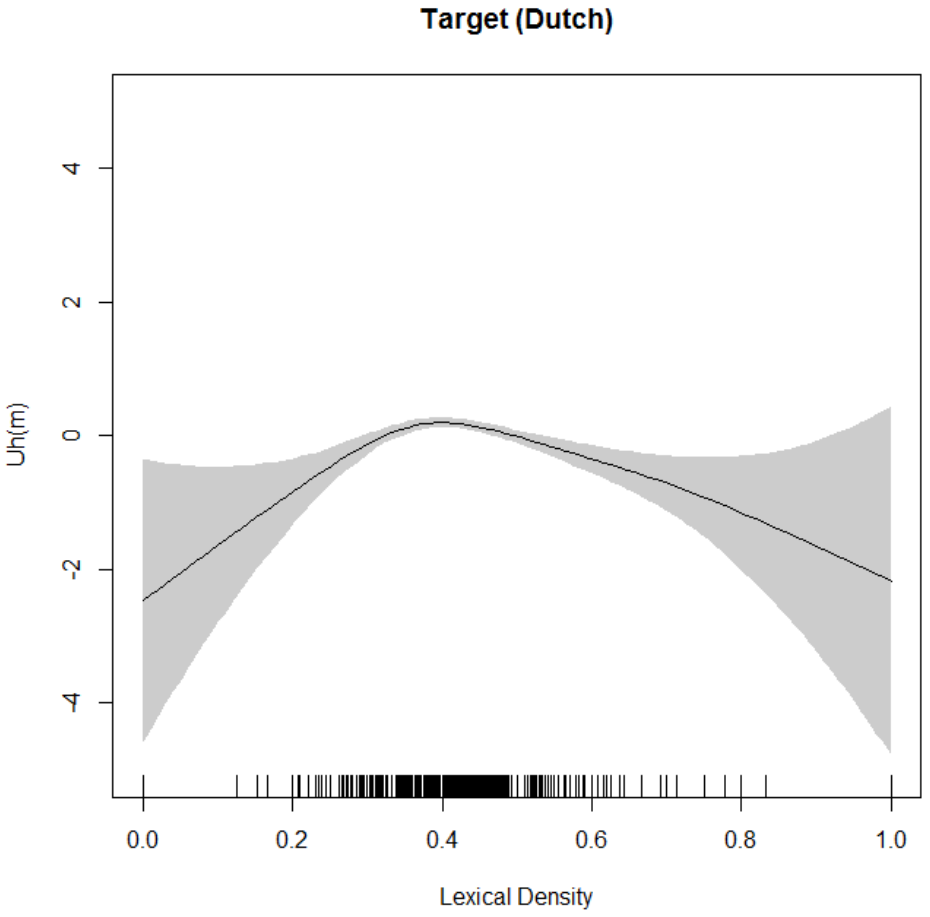
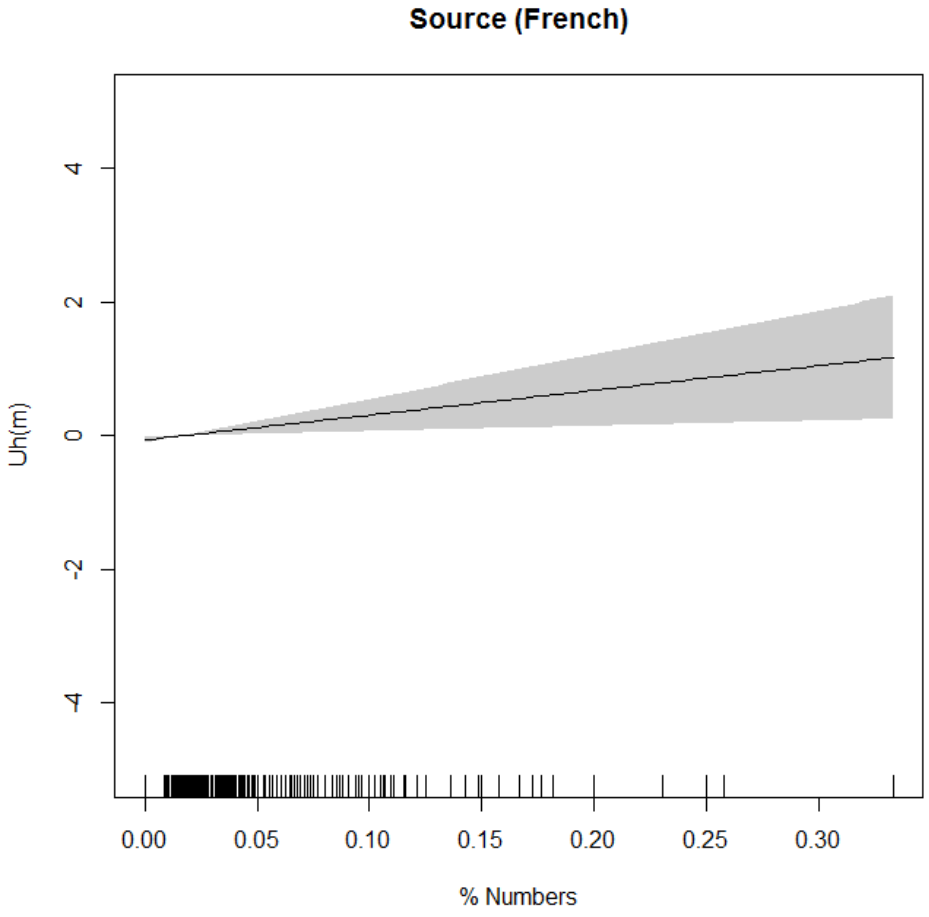
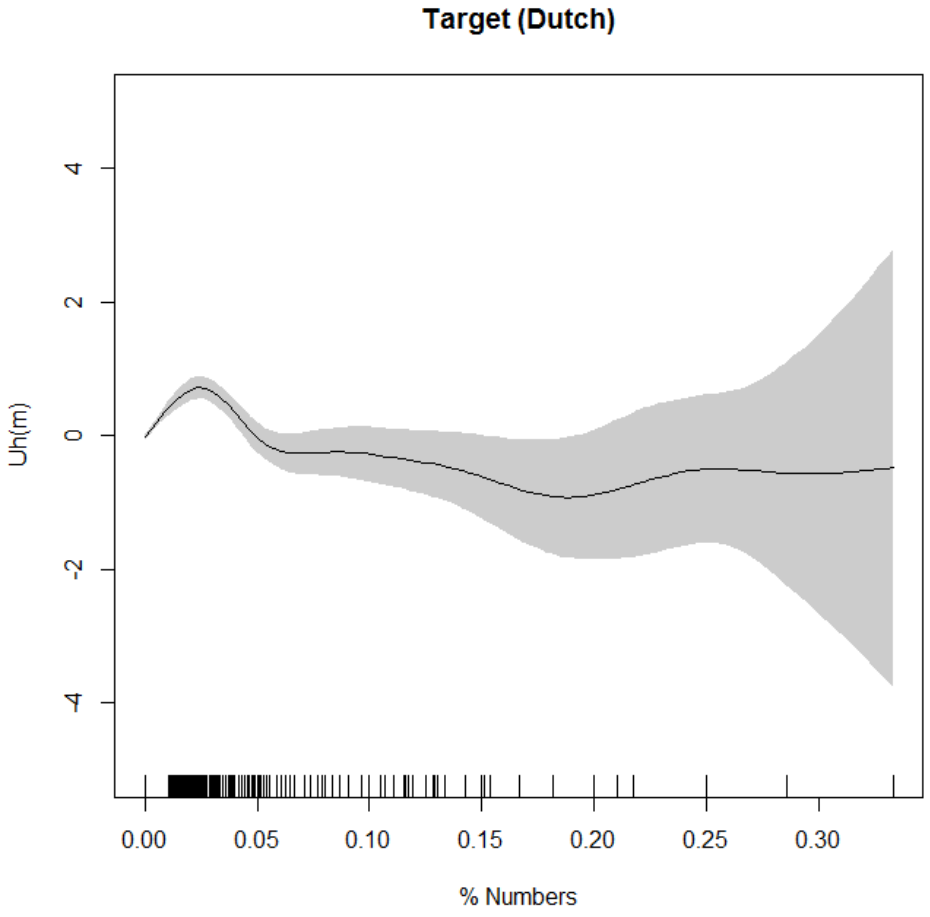
Lexical density



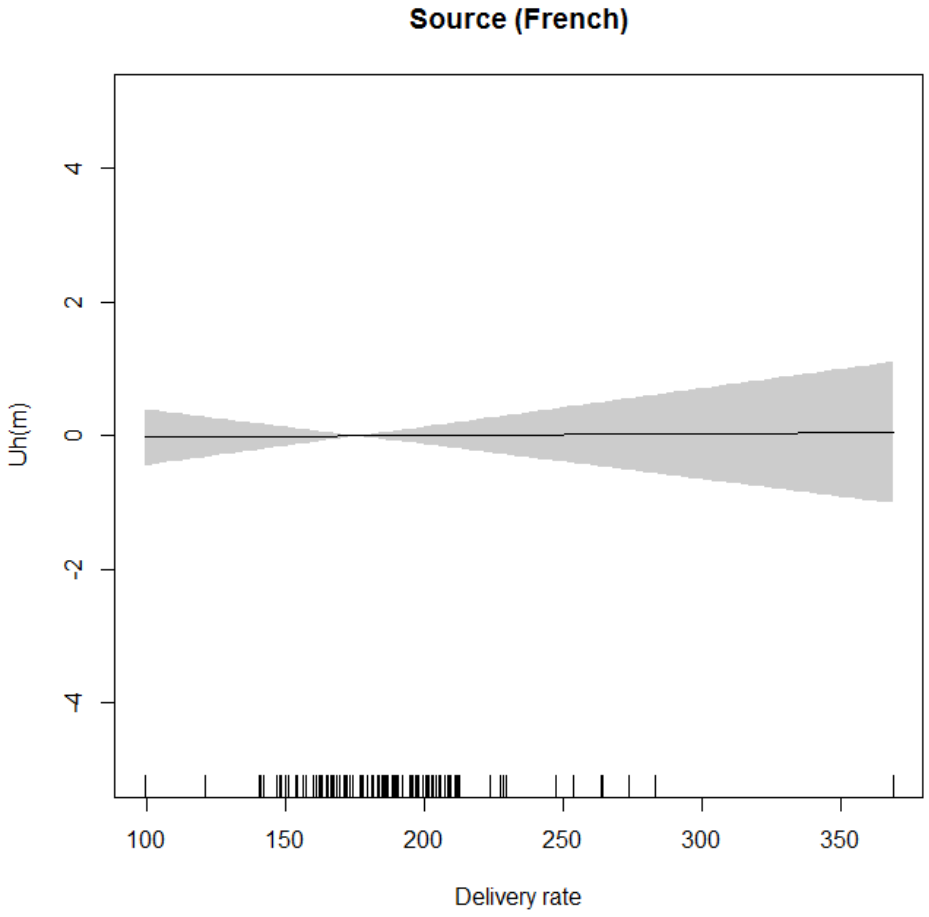


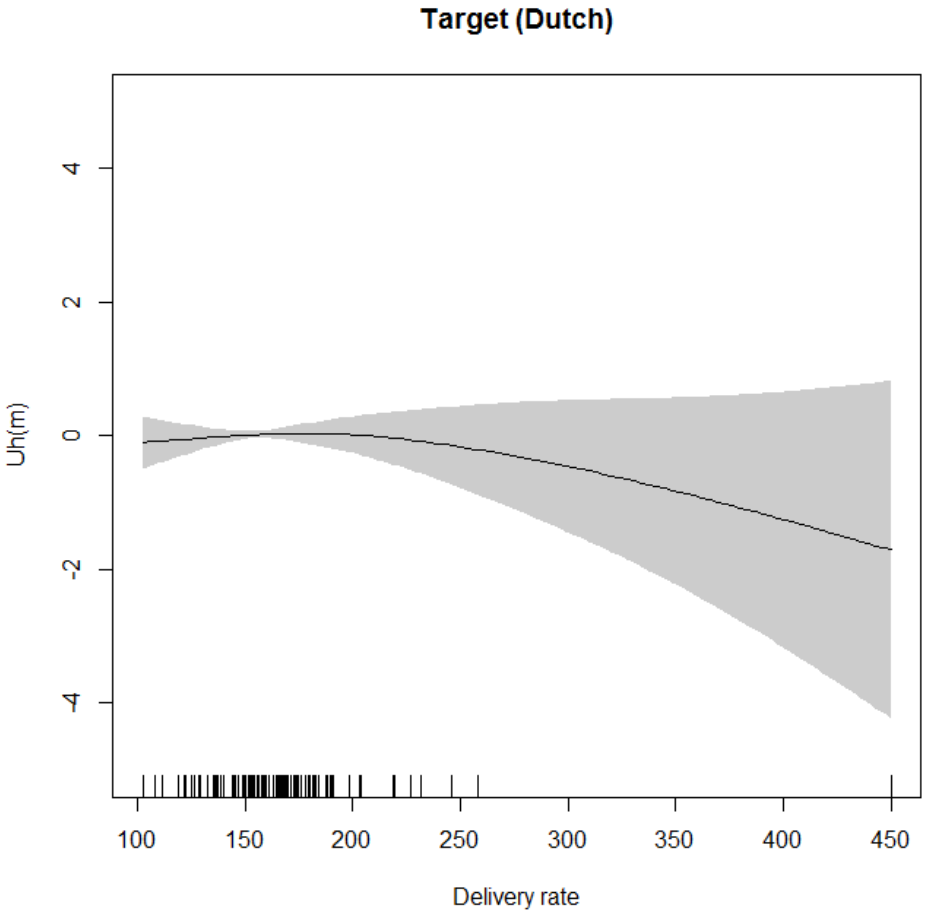
% of numbers


Source (French)
Uh(m)
4
2
0
-2
-4
0.00
0.05
0.10
0.15
0.20
0.25
0.30
% Numbers

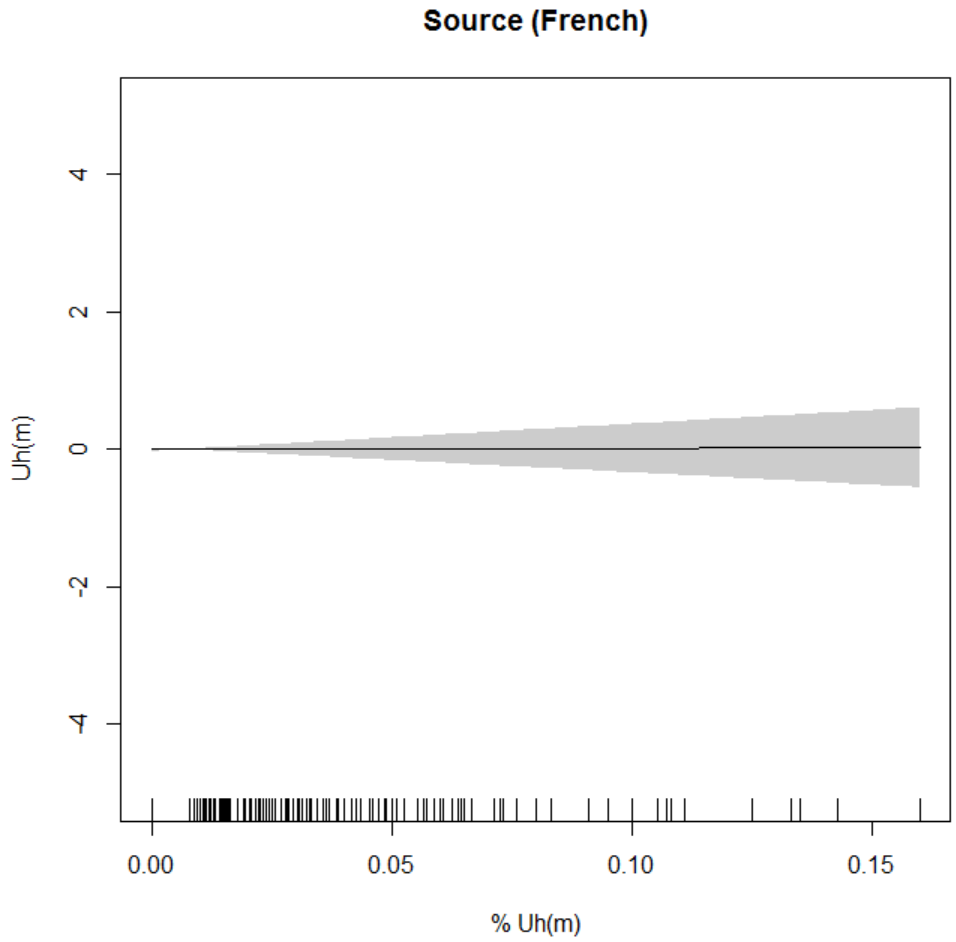

Target (Dutch)
Uh(m)
4
2
0
-2
-4
0.00
0.05
0.10
0.15
0.20
0.25
0.30
% Numbers

Delivery rate





% of *uh(m)*'s in the source (cf. Goldman-Eisler 1967; Gerver 1975)



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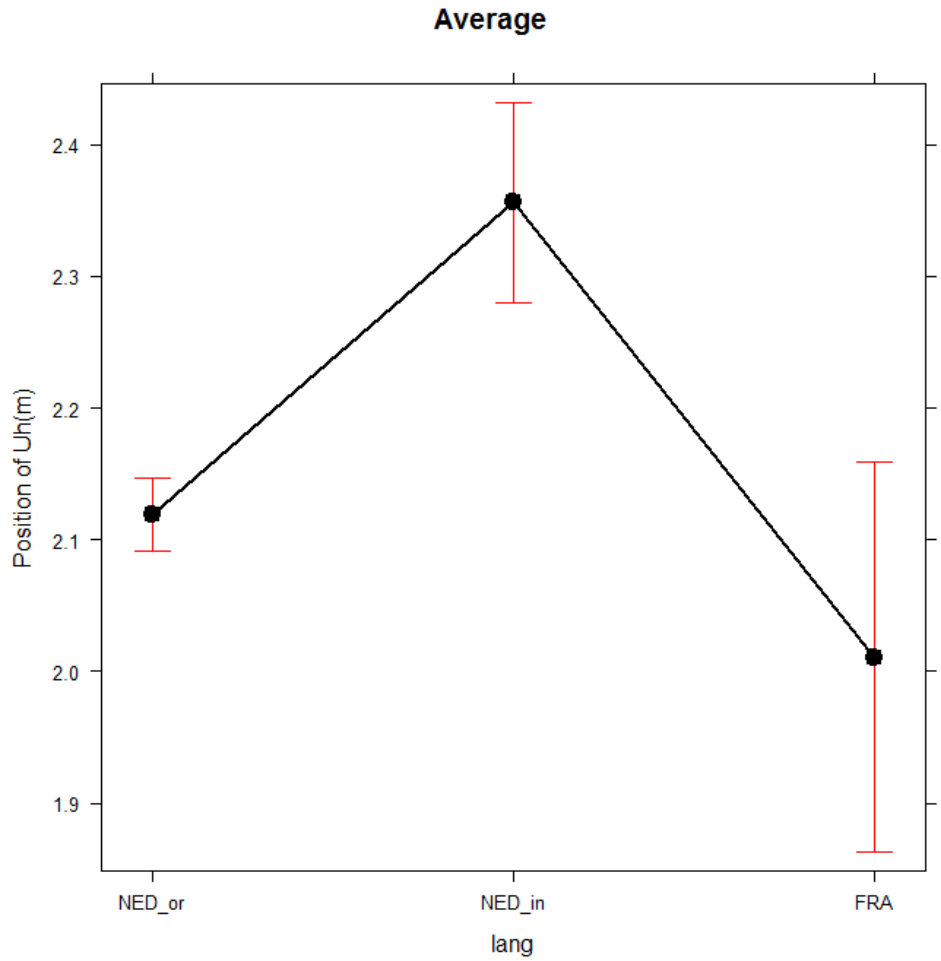
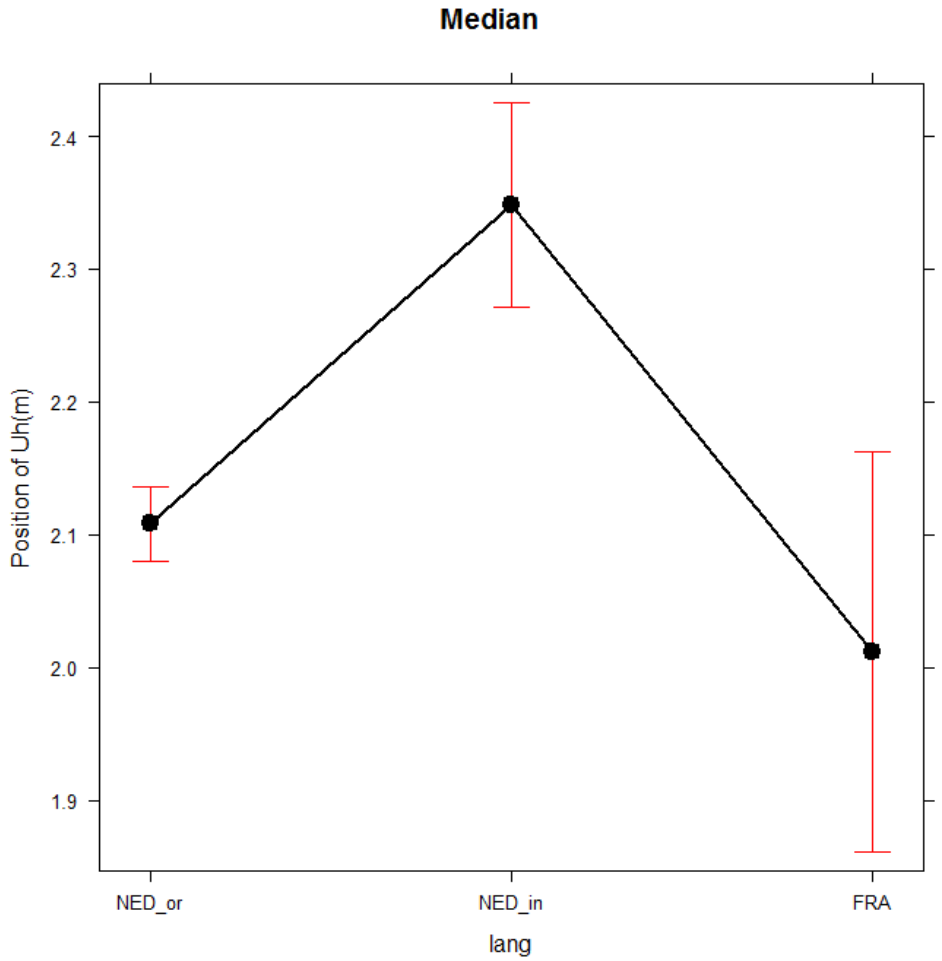

Average
Position of Uh(m)
2.4
2.3
2.2
2.1
2.0
1.9
NED_or
NED_in
FRA
lang


Median
Position of Uh(m)
2.4
2.3
2.2
2.1
2.0
1.9
NED_or
NED_in
FRA
lang

Conclusion

Cognitive load is different in interpreting than in non-interpreting

Clear effect of lexical density and numbers in the source

Cognitive load does not diminish throughout the sentence (but no predictive effects)

Hence, prospect of *uh(m)* within words (e.g. *over-uh-load*)

Thank you!

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